



WORKING PAPER

**SPECIAL AFRICA-INDIAN OCEAN (AFI)
REGIONAL AIR NAVIGATION (RAN) MEETING**

Durban, South Africa, 24 to 29 November 2008

Agenda Item 6: Development of a set of comprehensive work programmes in the air navigation field, aimed at improving efficiency of the air navigation system (Efficiency Committee)

IMPLEMENTATION OF GNSS-BASED PROCEDURES IN THE AFI REGION

(Presented by the International Air Transport Association (IATA))

SUMMARY

This paper requests a number of States to publish global navigation satellite system (GNSS) area navigation (RNAV) approach procedures for their international airports, where such procedures have been designed through IATA Projects. In total, IATA GNSS Projects included design of GNSS (RNAV) approach procedures, standard instrument departures (SIDs) and standard instrument arrivals (STARs) for thirty-one airports at seven States. So far only nine States have published these procedures.

Action by the meeting is in paragraph 2.

1. INTRODUCTION

1.1 In 2000, IATA established an RNAV (GNSS) Procedures Development and Implementation Programme, aimed at assisting States in the design and implementation of RNAV (GNSS) procedures. The programme included: World Geodetic System 84 (WGS-84) surveys; development of RNAV (GNSS) non-precision lateral navigation approach procedures (LNAV); development of RNAV (GNSS) SID and STAR procedures; modification of airspace structure design to meet RNAV (GNSS) requirements; development and preparation for publication of all relevant charts; flight verification of the RNAV (GNSS) procedures; drafting of national RNAV (GNSS) legislation, regulations; and training seminars.

1.2 The Southern African Development Community (SADC) was identified as a prime region for the development of these procedures. An agreement was reached with 14 Member States and the project started in January of 2001. It was later extended to include Cape Verde, Kenya and Uganda. In all, the project included 31 airports:

Angola:	<u>Luanda and Huambo</u> (2 airports) – not published;
Botswana:	Gaborone & Maun (2 airports) – published without restrictions;
Democratic Republic of the Congo:	Kinshasa and Lubumbashi (2 airports) – published without restrictions;

Kenya:	Nairobi Jomo Kenyatta, and Mombasa (2 airports) – published without restrictions;
Lesotho:	Maseru (1 airport) – published without restrictions;
Malawi:	Lilongwe and Blantyre (2 airports) – published without restrictions;
<u>Mauritius:</u>	<u>Mauritius and Rodrigues (Plaine Corail) (2 airports) – not published;</u>
<u>Mozambique</u>	<u>Maputo and Beira (2 airports) – not published;</u>
Namibia:	Windhoek & <u>Eros</u> (2 airports)
Seychelles:	Mahe & <u>Praslin</u> (2 airports)
South Africa:	Johannesburg and Cape Town (2 airports)
Swaziland:	<u>Matsapa</u> (1 airport)
Tanzania:	Dar es Salaam and Kilimanjaro (2 airports) – published without restrictions;
Zambia:	Lusaka and Livingstone (2 airports) – published without restrictions;
<u>Zimbabwe:</u>	<u>Harare and Victoria Falls (2 airports) – not published;</u>
<u>Cape Verde:</u>	<u>Sal Island and Francisco Mendes (2 airports) – not published;</u>
Uganda:	Entebbe (1 airport) - published

1.3 All States received GNSS model legislation, attended air traffic control (ATC) “train the trainer” courses (except the Seychelles and Swaziland) and attended implementation workshops (except Swaziland).

1.4 The following States have not yet published their GNSS procedures: Angola, Cape Verde, Mauritius, Mozambique, Swaziland and Zimbabwe. South Africa has published GNSS procedures with restrictions. Namibia and Seychelles have published GNSS procedures only for one of their respective airports.

Recommendation 6/x — Publication of GNSS procedures

That States having taken part in the IATA RNAV (GNSS) Procedures Development and Implementation Programme and which have not yet done so, publish GNSS-based approach procedures designed for their respective airports and remove operational restrictions.

2. ACTION BY THE MEETING

2.1 The meeting is invited to:

- a) note the contents of the paper; and
- b) urge States listed in paragraph 1.4 above to publish provided GNSS-based procedures in order to improve safety and operational efficiency.

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